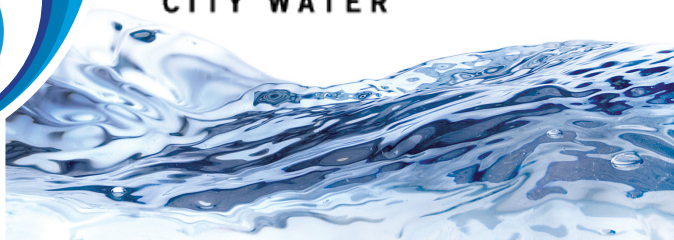
2016 WATER QUALITY REPORT

MURRAY

CITY WATER



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Dear Water Customer:

Murray City is pleased to distribute its annual Water Quality Report for calendar year 2016. The report contains information about Murray City's water quality, along with other information to help protect this important resource. We invite you to take a few minutes to read through this Report and find something that would be of interest and use to you. Our hope is that every time you hear water running you will be reminded of its value and how it makes your life better.

Worldwide, there are millions of people who do not have access to clean safe water, let alone having that water delivered to our taps, inside our homes. This is no small thing, so we would ask this one question. Why does water matter? The question seems a little silly, because it obviously matters. We are made of it, we are surrounded by it, we consume it and grow with it. Water is obviously a necessity of life. Access to clean water brings with it prosperity in all of its forms for our families, and our communities.

The World Economic Forum declared that water is the most important part of infrastructure. Water is an astonishingly complex and subtle force in an economy. "It is the single constraint on the expansion of every city, and bankers and corporate executives have cited it as the only natural limit to economic growth."

From the beginning, Murray City has always believed that water was a critical element to the establishment, maintenance and growth of the City. Therefore, the City has always made significant investments in its water resources as well as its infrastructure then and now.

We are fortunate that those who came before us looked into the future, made the necessary plans to provide this great and necessary resource. Our hope would be that you will take time to review this report and reflect on why water matters to you.

Sincerely,

David Ted Eyre

Ted Eyre
Murray City Mayor

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Murray City Water Department

Water department employees	15
Murray water service area population	36,000
Total gallons used in 2016	3,077,178,00
Total acre feet used in 2016	9,443.22
Number of water sources	27 Total
Deep wells	19
Springs	8
Average hardness of water supply	200 mg/L
	12 grains/gallon
Water service connections	10,330
Total miles of waterlines	185 Miles
Total fire hydrants	1,880
City owned	1,329
Private owned	551
Water storage capacity (gallons)	12,000,000

Important Phone Numbers

Emergency / After Hours:
801.264.9669

Public Services, Water, Wastewater, Streets, Engineering
General Office:
801.270.2440

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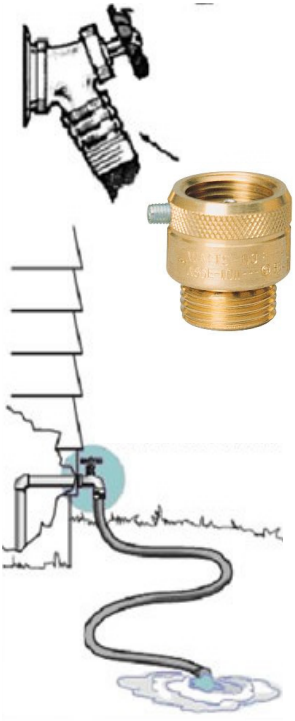
What is Backflow?

Water distribution systems are designed with the intention of the water flowing to the point of use, or from the City's main to the customer. However, hydraulic conditions within the system may deviate from "normal" conditions, causing water to flow in the opposite direction. This undesirable flow reversal of water is called backflow.
Backflow can cause the drinking water system to become polluted or contaminated.

Hose Bib (Hose Attached) Vacuum Breakers (HAVB)

Water users commonly use garden hoses for a variety of purposes, including:



- Watering lawns, flower beds and gardens.
- Washing cars and other items.
- Filling pools and hot tubs.
- Washing workshops, garages, food prep areas, etc.
- Applying liquid fertilizers and pesticides.

Any of these may involve attaching a chemical reservoir to the end of the hose. (If at all possible avoid this practice!) In each of these cases, there is the potential to contaminate the water supply. Hose Bib Vacuum Breakers are simple, low-cost devices that should be used to help prevent backflow of water when engaging in the use of water hoses. They are easy to install and available at many plumbing supply stores.

Save Water, Save Energy, Save Money

Showering is an important part of the day—and one of the leading ways Americans use water in the home, accounting for nearly 17 percent of indoor water use. Every time you take a shower, you also use energy to heat the water to your showerhead. But you can shower better by replacing your old showerhead with a WaterSense labeled model and save water, energy, and money. By replacing just one showerhead with a WaterSense labeled model, EPA estimates the average family can save 2,900 gallons of water, the amount of electricity needed to power its home for 13 days, and more than $70 in energy and water costs every year.
https://www.epa.gov/watersense/shower-better

WaterSense© Rebate Program

Murray City Water Department is offering rebates valued at $75 per toilet/$25 per shower head to qualified water users for replacing their existing toilet/showerhead with a new EPA WaterSense© labeled version.

EPA WaterSense PARTNER

Conserve Water, Save Money & Get A Rebate!

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Application and details available at:
http://www.murray.utah.gov/DocumentCenter/Home/View/4092

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Lead in Drinking Water

Lead is a naturally occurring element found in small amounts in the earth's crust. While it has many beneficial uses, it is known to be harmful to human health if inhaled or ingested in large amounts, especailly in young children and pregnant women.

Lead exposure can come from all parts of our environment - air, soil and dust, food, and water. Although Murray City water is well below the acceptable limits, lead can enter drinking water through the corrosion of plumbing materials inside the home.

The longer the water has been sitting in your home's pipes, the more potential lead has to leach from plumbing fixtures. You can minimize the potential for lead exposure by flushing your cold water tap until the water becomes cold before using water for drinking or cooking.

You can find more information on lead in drinking water at www.epa.gov/lead/learn-about-lead or from the Safe Drinking Water Hotline 1-800-426-4791

Fluoridation

On October 1st 2003, Murray City began adding fluoride to the drinking water supply. This came about because of the passage of a ballot initiative in 2000. Murray voters passed the initiative by a 53% margin.

Fluoride is a naturally occuring mineral and, with a few exceptions, almost all water has some fluoride in it.

Murray City's water system has a natural fluoride level average of .25 ppm (parts per million). In accordance with Salt Lake Valley Health Department regulations, Murray Water Department adds enough fluoride to the water to bring the combined level between the mandated range of .6 to .9 ppm.

Non-fluoridated Water

Murray City offers two non-fluoridated water sources to those who would like to fill containers for drinking water. One site is located at 8 East 6100 South, the other is located at 630 East 5400 South.

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We are pleased to present Murray City's 2016 Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. We are committed to continually making improvements to our water system to ensure that the quality of your water is safe, dependable and properly protected.

Murray City obtains its water from springs near Big Cottonwood Canyon along with underground water wells.

Murray City routinely monitors for contaminants in our drinking water in accordance with the Federal and State Drinking Water Rules. The following table shows the results of our monitoring for the calendar year of 2016, beginning January 1, 2016 through December 31, 2016.

Murray City Water Department

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

Key to Table

MCL	**Maximum Contaminant Level**
MCLG	**Maximum Contaminant Level Goal**
MFL	**Million fiber per liter (measures asbestos)**
NTU	**Nephelometric Turbidity Units (cloudiness)**
Cfu	**Colony forming units (bacterial cell colonies)**
pci/L	**Picocuries per liter (radioactive units)**
ppm	**Parts per million (mg/l 1, penny in $10,000)**
ppb	**Parts per billion (ug/l, 1 penny in $10 million)**
ppt	**Parts per trillion (1 penny in $10 billion)**
ppq	**Parts per quadrillion (1 penny in $10 trillion)**
TT	**Treatment technique, method**
UR	**Unregulated, no EPA standard set**
ND	**Non-detected (less than the method can see)**
SW	**State waiver (never used or detected)**
NR	**Non reportable**
NE	**Not established**

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This chart lists the most recent test results for Murray City facilities and indicates the most likely source of contamination. The data is a range for all wells and springs with the lowest and highest levels.

Maximum Contamination Level (MCL) is the highest level of contaminant that is allowed in drinking water. Using the best available technology, MCL's are set as close to the goal as feasible. Maximum Contaminant Levels Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected health risk. MCGL's allow for a margin of safety. In addition to the parameters listed in this report, Murray City monitors for many unregulated contaminants. The results are available at the Public Services office.

Substance	Units	MCL	MCLG	Murray City ND/Low-High	Most Likely Source of Contamination
PRIMARY INORGANICS-Monitoring required at least every 3 years for groundwater sources					
Arsenic	mg/L	.010	0	ND to .0029	Erosions of natural deposits
Barium	mg/L	2	2	.035 to .223	Erosions of natural deposits
Copper	mg/L	1.3	1.3	ND to .12	Erosions of natural deposits
Cyanide	mg/L	.2	.2	ND to .01	Erosions of natural deposits
Fluoride	mg/L	4	4	ND to .34	Erosions of natural deposits
Iron	mg/L	.3	.3	ND to .09	Erosions of natural deposits
Lead	mg/L	.015	0	ND to .011	Erosions of natural deposits
Nickel	mg/L	.1	NE	ND to .0072	Erosions of natural deposits
Nitrate (as N)	mg/L	10	10	ND to 3.9	Excess Fertilization
Selenium	mg/L	.05	.05	ND to .0044	Erosions of natural deposits
Sodium	mg/L	NE	NE	9.6 to 119	Erosions of natural deposits
Sulfate	mg/L	500	500	30 to 110	Erosions of natural deposits
TDS	mg/L	2000	NE	88 to 900	Erosions of natural deposits
Turbidity	NTU	5	.03	ND to .35	Suspended matrial from soil runoff
Zinc	mg/L	5	5	ND to .03	Erosions of natural deposits

Water Quality Results

Substance	Units	MCL	MCLG	Murray City ND/Low-High	Most Likely Source of Contamination
SECONDARY INORGANICS-aesthetic standards					
Chloride	mg/L	250	NE	10 to 210	Erosions of natural deposits
Color	CU	15	NE	0 to 1	Decaying, naturally-occuring organic material and suspended particles
pH		6.5 to 8.5	NE	7 to 7.98	Naturally occurring
MICROBIOLOGICAL					
Total Coliform	% positive each month	5%	0.00%	0.00%	Human and animal fecal waste, naturally-occuring in the environment. MCL is for monthly compliance. All repeat samples were negative; no violations were issued
RADIOLOGICAL					
Gross- Alpha	pCi/L	15	NE	-.2 to 13	Decay of natural and man made deposits
Gross-Beta	pCi/L	50	NE	.7 to 16	Decay of natural and man made deposits
Combined Radium	pCi/L	5	NE	-.18 to 2.2	Decay of natural and man made deposits
Uranium	mg/L	.03	NE	.0175 to .0181	Decay of natural and man made deposits
UNREGULATED PARAMETERS- monotoring not required					
Calcium	mg/L	UR	NE	19.4 to 113	Erosion of naturally occuring deposits
Hardness, total	mg/L	UR	NE	81 to 463	Erosion of naturally occuring deposits
Hardness, grains	Grains per Gallon	UR	NE	4.73 to 27.05	Naturally occurring
Magnesium	mg/L	UR	NE	7.8 to 43.8	Erosion of naturally occuring deposits
Potassium	mg/L	UR	NE	1.3 to 8.4	Erosion of naturally occuring deposits
Silica	mg/L	UR	NE	5.7 to 17.9	Erosion of naturally occuring deposits
DISTRIBUTION SYSTEM CONTAMINANTS					
Chlorine Residual	mg/L	4	NE	ND to .28	Drinking water disinfectant
TTHM	ppb	80	0	0 to 5.9	By-product of drinking water disinfection
Fluoride	ppm	4	4	.24 to .91	Water additive that promotes strong teeth
LEAD & COPPER (tested at consumer's residence) tested every 3 years					
Copper	mg/L	1.3	1.3	.0162 to .378	Corrosion of household plumbing systems
Lead	mg/L	.015	.015	ND to .0066	Corrosion of household plumbing systems
90th Percentile Compliance Numbers from 2016				Copper = 0.178	Lead = 0.0032
VOCs					
Chloroform	ug/L	UR	NE	ND to 3.1	By-product of drinking water disinfection
Bromodichloromethane	ug/L	UR	NE	ND to .6	By-product of drinking water disinfection
PESTICIDES					
None Detected					

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Murray City Corporation
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Murray, Utah
84107

EPA WaterSense

Tap into Murray Quality
MURRAY CITY WATER

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